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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,792	07/25/2003	Douglas J. Guerrero	32848	2661

23589 7590 09/28/2004

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2405 GRAND BLVD., SUITE 400
KANSAS CITY, MO 64108

EXAMINER

THORNTON, YVETTE C

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,792

Applicant(s)

GUERRERO, DOUGLAS J.

Examiner

Yvette C. Thornton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04302004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

This is written in reference to application number 10/627792 filed on July 25, 2003.

Priority

1. The examiner acknowledges that the Oath filed on November 18, 2003 claims priority under 35 USC 119 to Taiwan 92120958 and PCT/US03/24100. Priority however is not granted because the said references were not filed *prior* to the filing of the instant application.

Information Disclosure Statement

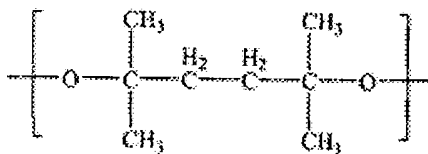
2. The Information Disclosure Statement filed on April 30, 2004 has been entered and fully considered.

Claim Objections

3. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 1 as written requires one of R1 or R2 to be a moiety of bisphenol A and the other to be a group



or



other than

However, instant claim 4 requires one of R1 and R2 to be selected from a group comprising both of the prohibited compounds and bisphenol A. Claim 4, as written, fails to further limit claim 1. Correction is required.

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Claim Interpretation

4. The examiner does not view claims 5-8, 17-20, 35-37 and 46-48 as requiring the choice of formula II or III. The limitations of the said claims are met when formula (I) is chosen. The following rejections are based on such an interpretation.

Claim Rejections - 35 USC § 102

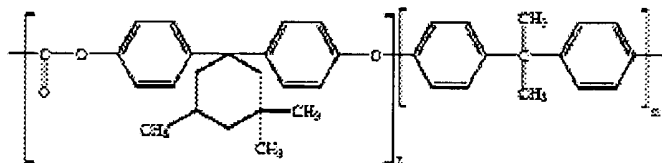
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

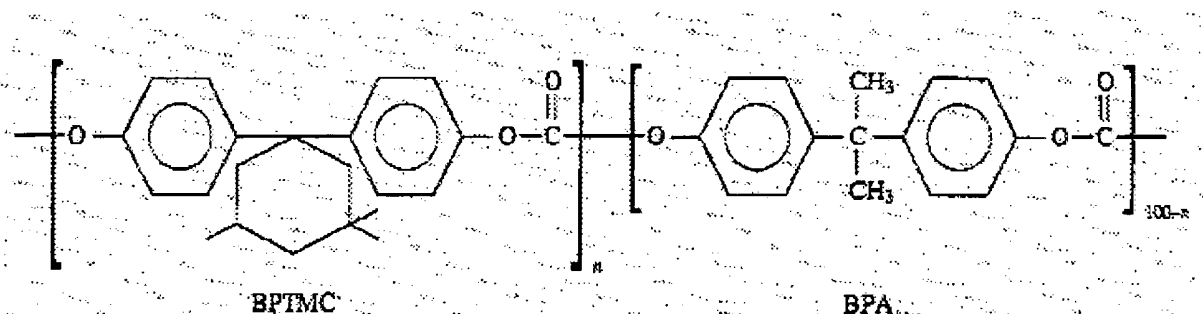
6. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Carmichael et al. (US 6,071,662 A). Carmichael teaches an anti-curl layer comprising a polymer binder represented by formula (II) having the structure:



Such a copolymer is under the tradename APEC from Bayer (c. 13, l. 5-c. 14, l. 27). It is the examiner's position that the said copolymer meets the limitations of claimed formula (I) wherein R1 is bisphenol trimethylcyclohexane (TMC) and R2 is bisphenol A. The examiner further takes the position that 1,1-bis-(4-hydroxyphenyl)-3,3,5-trimethylcyclohexane is a derivative of bisphenol Z.

7. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Cais et al. (US 5,554,473 A). Cais teaches an organic photoconductive imaging receptor in which the charge transport layer contains as a binder a copolycarbonate of 1,1-bis-(4-hydroxyphenyl)-3,3,5-trimethylcyclohexane and 2,2-bis-(4-hydroxyphenyl)propane (abstract). The said copolycarbonate has the structure:

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(See c. 4, l. 20-53 and examples. It is the examiner's position that the said copolymer meets the limitations of claimed formula (I) wherein R1 is bisphenol trimethylcyclohexane (TMC) and R2 is bisphenol A. The examiner further takes the position that 1,1-bis-(4-hydroxyphenyl)-3,3,5-trimethylcyclohexane is a derivative of bisphenol Z.

8. Claims 9-49 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by White et al. (SPIE Vol. 4690) with Promerus (<http://www.promerus.com/displayproduct.asp?cid=11&id=11&type=2>) cited to show inherent properties. White teaches a fabrication technique involving thermally sacrificial polymeric materials. The said polymers are coated onto a substrate and patterned into the shape of the desired channels and devices. These polymeric structures are then over-coated with a permanent structural material such as an inorganic glass or polymer (abstract, sect. 1.2). The structures of the two copolymers synthesized are shown in Figure 6 (sect. 2). Polymer I meets the limitations of claimed formula (I) wherein R1 is 2,5-dimethyl-2,5-hexanediol and R2 is bisphenol A. Polymer II meets the limitations of claimed formula (I) wherein R1 is 1,4-benzenedimethanol and R2 is bisphenol A. See also sect. 3.2. Imaging experiments were done wherein the taught polymers were admixed with a photoacid generator and a solvent. The formed solution was spin-coated onto a silicon wafer and then soft-baked at 90 C for three minutes. After exposure at 248 nm, a post-exposure bake was performed at 115 C for 6 minutes. AVATREL 2000P dielectric polymer was spin-coated over the formed structure. The samples were then processed by cross-linking the overcoat with exposure at 365 nm. Further curing of the overcoat and decomposition of the underlayer were accomplished together in a Lindberg Furnace. See also the section on Interferometry Measurements.

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Promerus (<http://www.promerus.com/displayproduct.asp?cid=11&id=11&type=2>) discloses that AVATREL 2000P is a negative tone, photoimageable dielectric material designed to have very low stress and to be imaged up to 150 microns thick. It is the examiner's position that AVATREL 2000P meets the limitations of a photoresist as set forth in instant claims 26-29 and 41.

9. The examiner further notes that the actual publication date of the cited SPIE reference is July 24, 2002, which is prior to the effective filing date of the instant application, which is July 31, 2002.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 571-272-1336. The examiner can normally be reached on Monday-Thursday 8-6:30.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Yvette Clarke Thornton
Primary Examiner
Art Unit 1752

yct
September 21, 2004